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ABSTRACT

One aspect of the invention provides a novel scheme to improve channel jitter tolerance and perform data recovery across a serial data channel. In one implementation, the invention samples each data unit in the data channel multiple times and, using two data cycles, selects one of the samples as representative of the data unit. According to one aspect, the invention performs edge detection between adjacent data samples to determine the location of transitions between data units (bits). A representative data sample is chosen which is as far away as possible from the detected edge and the next expected edge and yet adjacent to, or equal to, the ideal current sample point. According to another aspect of the invention, as between two equally possible samples, the algorithm selects the sample which is furthest from the distribution of prior cycle edges.